

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A propulsion control system for a motor vehicle having a propulsion system (1) which includes an internal combustion engine (E) with a shaft (S) that can be coupled to a transmission (2) including a gearbox (G);

the system including:

a control accelerator (A) with associated electrical detector means (S1);

sensor means (S2) for supplying electrical signals indicating ~~the~~a speed of rotation (n) of the shaft (S) of the engine (E) and/or ~~the~~a speed (V) of the motor vehicle; and

electronic control means (SCU) operable to control the propulsion system (1) of the motor vehicle in a predetermined manner in dependence on signals supplied by ~~the~~ said detector means (S1) and ~~the~~ said sensor means (S2);

~~the system being characterised in that~~wherein the accelerator (A) is associated with:

a sensor (S1) operable to supply electrical signals indicating ~~the~~a force (F_p) applied to the accelerator (A) by the driver, and

an actuator device (6) operable to modify the position of ~~the~~ said accelerator (A), and in that the system control means (SCU) are operable to:

acquire the signals emitted by ~~the~~ said sensor (S1) and establish an instantaneous traction force (F_x), which ~~the~~ drive wheels (W) will develop on the ground,

corresponding to the instantaneous value of the force (F_p) applied to the accelerator (A) by ~~the~~a driver; and

control ~~the~~ said actuator device (6) in such a way that it tends to place the accelerator (A) in a position corresponding, according to a predetermined function, to the instantaneous value of the speed (V) of the motor vehicle.

2. (currently amended): A control system according to Claim 1, in which first memory means (M1) are associated with ~~the~~ said control means (SCU) for storing data for defining a driveability map which correlates values of the force applied to the accelerator (A) with the travel speed (V) of the motor vehicle and with the traction force (F_x) developed on the ground.

3. (currently amended): A control system according to Claim 1, for a motor vehicle with a servo-assisted gearbox (G) using gears, with an input shaft (I) for coupling to the shaft (S) of the engine (E) by means of a servo-controlled clutch (C); respective first and second electrically controlled actuator means (4, 5) being associated with the gearbox (G) and the clutch (C);

the system being characterized in that ~~the~~ said control means (SCU) are operable in a predetermined manner to determine which speed ratio to select in the gearbox (G), in accordance with criteria aimed at reducing the fuel consumption of the engine (E).

4. (currently amended): A control system according to Claim 3 including second memory means (M2), associated with the control means (SCU) and storing data for defining the

speed ratio or gear to be used in the gearbox (G) in dependence on the traction force (F_x) that the drive wheels (W) develop on the ground and on the speed (V) of the vehicle, and in which ~~the~~ said control means (SCU) are operable to determine the gear to be used on the basis of data stored in ~~the~~ said second memory means (M2).

5. (currently amended): A control system according to Claim 4, in which ~~the~~ said second memory means (M2) contain data which, in ~~the~~ a ground traction force/ vehicle speed plane (F_x/V), represent thresholds for gear change; the change from one gear to that immediately above (or below) having a different threshold from that for a change the other way.

6. (currently amended): A control system according to Claim 2, in which ~~the~~ said driveability map is such that, for values of vehicle speed (V) lower than a pre-established threshold, non-negative values of traction force (F_x) on the ground correspond to values of the force applied to the accelerator (A).

7. (currently amended): A control system according to Claim 6 in which ~~the~~ said control means (SCU) are operable to cause ~~the~~ a clutch (C) to disengage when the accelerator (A) is released while the vehicle speed (V) is less than ~~the~~ said predetermined value and the driver is not changing gear; ~~the~~ said clutch (C) being re-engaged as soon as the accelerator (A) is acted on again.

8. (currently amended): A control system according to Claim 7, for a motor vehicle in which a reversible electric machine (M), operable to act as electricity generator and as electric

motor, is coupled to the internal combustion engine (E) and in which an electronic control unit (3) is associated with the internal combustion engine (E);

the system being characterized in that ~~the~~ said control means (SCU) are operable to cause the internal combustion engine (E) to be switched off, by means of ~~the~~ said electronic control unit (3), each time the accelerator (A) is released and the clutch (C) is disengaged, except when the clutch (C) has been disengaged in order to change gear; and cause the internal combustion engine (E) to be started again by means of the electric machine (M) operating as a motor, as soon as the accelerator (A) is operated once again.